REMARKS

Claims 1-16 remain present in this application.

Claims 1, 5-7, 9 and 13-15 have been amended. Reconsideration of the application, as amended, is respectfully requested.

Claims 1-8 stand objected to for certain informalities. In view of the foregoing amendments, in which the Examiner's helpful suggestions have been followed, it is respectfully submitted that these informalities have been addressed. Reconsideration and withdrawal of any objection to the claims are respectfully requested.

Claim 5 stands objected to under 35 USC 112, first paragraph. This rejection is respectfully traversed.

In view of the foregoing amendments and remarks, in which proper antecedent basis has been provided for claim 5, it is respectfully submitted that the claims are sufficiently clear to allow one of ordinary skill in the art to make and/or use the invention. Reconsideration and withdrawal of the 35 USC 112, first paragraph rejection are respectfully requested.

Claims 1-4 and 6-8 stand rejected under 35 USC 103 as being unpatentable over FITZGERALD, U.S. Publication 2002/0125471. This rejection is respectfully traversed.

The Examiner asserts that "Fitzgerald discloses a strained-channel MOSFET structure (Fig. 5A), comprising: a substrate; a graded SiGe layer (502) on the substrate; a relaxed buffer layer (506; SiGe) on the graded SiGe layer; a strained channel-forming layer (508); a gate dielectric layer (510); a polysilicon gate electrode (512); and source and drain regions (513, 514). Although Fitzgerald does not expressly disclose that the strained channel forming layer can also be SiC, one of ordinary skill in the art would readily recognize that SiC is also an art-known commonly used semiconductor material and possesses desirable

performance at high temperature and/or at high power, and that strained SiC is desirable for forming a channel layer with improved channel performance, as evidenced in the prior art such as Punchner (see col. 2, lines 8-11)."

Independent claim 1 of the present application reads as follows (emphasis added):

> 1. A strained silicon carbon alloy MOSFET structure, comprising:
> a substrate;
> a graded SiGe layer on the substrate;
> a relaxed buffer layer on the graded SiGe layer;
> a strained silicon carbon alloy layer on the relaxed buffer layer acting as a channel;
> ***a gate dielectric layer on the strained silicon carbon alloy layer;***
> a gate electrode on the gate dielectric layer; and
> a source region and a drain region on the substrate opposite and adjacent to the gate electrode.

It is clear that the strained silicon carbon alloy MOSFET structure of independent claim 1 comprises a strained silicon carbon alloy layer on the relaxed buffer layer acting as a channel, and **a gate dielectric layer on the strained silicon carbon alloy layer**.

However, Punchner discloses in column 1, lines 61-64 (emphasis added):

> "The above and other needs are met by a method for fabricating a semiconductor device on a substrate, where the improvement includes ***forming a strained silicon carbide channel layer and a silicon capping layer on the substrate.***"

In Puncher, **the strained silicon carbide channel layer 20 requires a silicon capping layer thereon**. The strained silicon carbon alloy MOSFET structure in claim 1 of the present application does **not** require a silicon capping layer on the strained silicon carbon alloy layer. One of ordinary skill in the art therefore could not combine teachings of Punchner into the device of Fitzgerald to fabricate the strained silicon carbon alloy MOSFET structure in claim 1.

In view of the foregoing amendments and remarks, it is respectfully submitted that the structure of independent claim 1, as well as its dependent claims, is neither taught nor suggested by the prior art utilized by the Examiner. Accordingly, reconsideration and withdrawal of the 35 USC 103 rejection are respectfully requested.

Favorable reconsideration and an early Notice of Allowance are earnestly solicited.

Because the additional prior art cited by the Examiner has been included merely to show the state of the prior art and has not been utilized to reject the claims, no further comments concerning these documents are considered necessary at this time.

In the event that any outstanding matters remain in this application, the Examiner is invited to contact the undersigned at (703) 205-8000 in the Washington, D.C. area.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

By _____
Joe McKinney Muncy
Registration No.: 32,334
BIRCH, STEWART, KOLASCH & BIRCH, LLP
8110 Gatehouse Rd
Suite 100 East
P.O. Box 747
Falls Church, Virginia 22040-0747
(703) 205-8000
Attorneys for Applicant